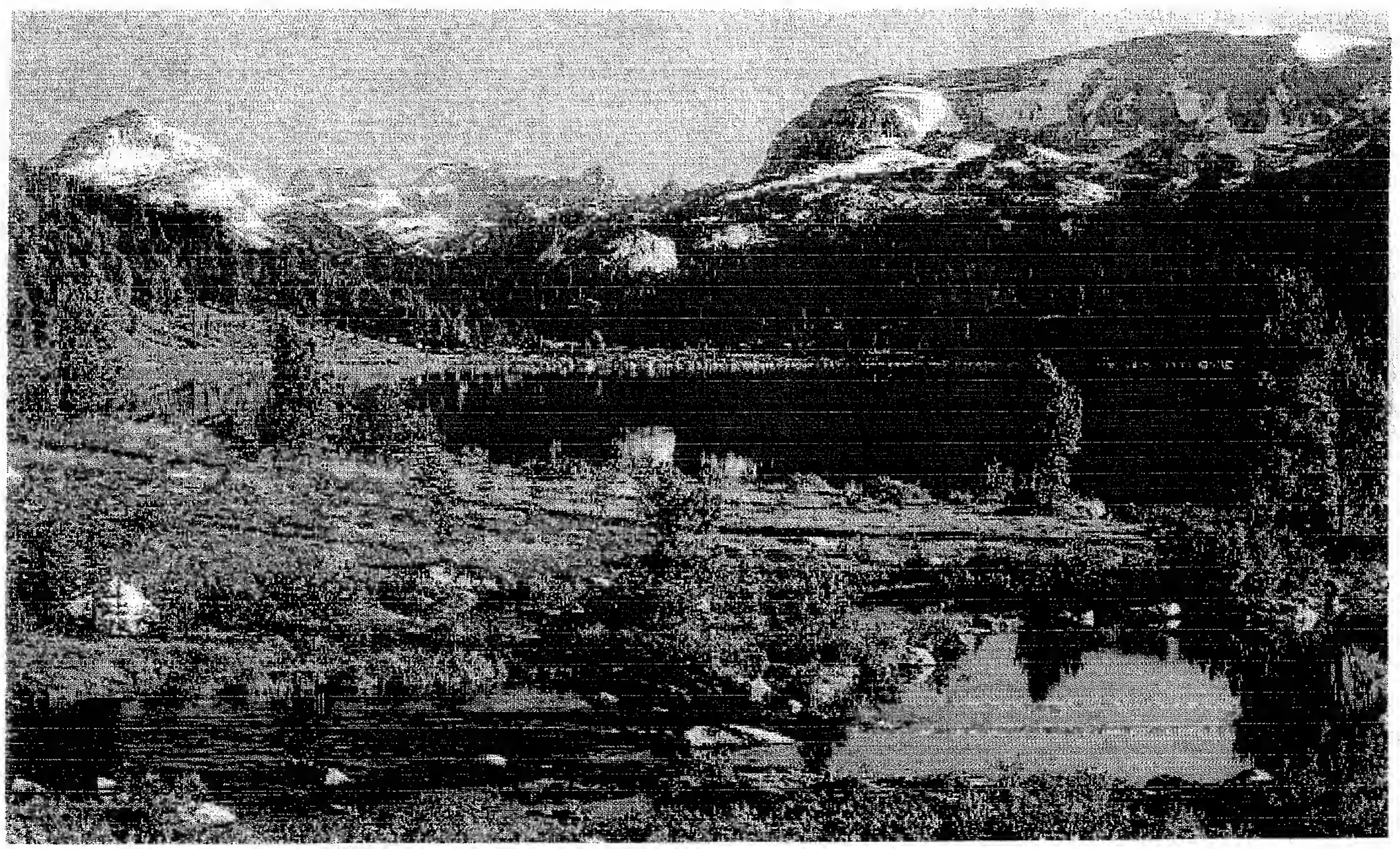
Still Alive With Sir Clive!

ZXir QLive Alive!

The Timex/Sinclair NorthAmerican User Groups Newsletter

Volume 11 No.1 Spring 2001

MEMORY MAP



Oregon

ZXir QLive Alive! ©

Established 1991 The Timex/Sinclair NorthAmerican User Groups Newsletter

T/SNUG Information

We wish to support the following platforms: ZX-80/81, TS-1000, Spectrum, TS-2068, Z88 and QL. If you have any questions about any of these fine Sinclairs, contact the:

Chairman

Chief Motivator
Donald S. Lambert
738 Gunnar Ln.
Forsyth, IL 62535
(217) 875-8043

Vice-Chairmen

Tape & JLO PD Library

Luke Perry
3708 NE 109th Ave H5
Vancouver WA 98682

Z88 Library

Dave Bennett (HATSUG)
1275 Timber View Dr.
Mechanicsburg, PA 17055-9146
717 732-4374

QL Hacker's Journal

Timothy Swenson
2455 Medallion Dr.
Union City, CA 94587-1914
swensontc@geocities.com

TS-2068

Rod Humphreys (VSUG)
10984 Collins Pl.
Delta, BC V4C 7E6 Canada
604 583-2819

QL PD Library

John Donaldson (CATUG)
835 Foxwood Cir
Geneva, IL 60134-1631
630 232-6147

AERCO & Z80 Emulator

Keith Watson
41634 Amberly Dr
Mt. Clemens, MI 48038

--==GATOR==--

Bob Swoger (CATUG)
613 Parkside Cir
Streamwood, IL 60107-1647
630 837-7957 Work 847 576-8068

ZXir QLive Alive!

Is the newsletter of T/SNUG, the Timex/Sinclair North American User Groups, providing news and software support to the T/S community in a VOLUME of four newsletters per year; beginning with the Spring (March) issue.

T/SNUG's main goal is to preserve and encourage the use of Sinclair computers by providing an open forum for the exchange of knowledge, building and maintaining of software libraries. Providing vendors, repair service and members with free ad space.

It is the user groups and individual subscribers, rather than the vendors, that provide the pecuniary support for this newsletter. Vendors and developers receive this newsletter free of charge, though contribution from vendors and user groups is gratefully accepted. Please support our vendors and service providers whenever possible.
If you have a problem or you have solved a problem, please share it with the rest of us. No problem will be considered unimportant.

Editor/Treasurer/Publisher

You can keep T/SNUG alive by an annual contribution of $12 for one VOLUME made payable to Abed Kahale.
Send check to:-

ABED KAHALE
432 WEST OAKS TRL
WOODSTOCK GA 30188-7358

Back copies are available for $1.00 each postpaid.

Article Contributions

Send in your articles and inputs by disk, hardcopy mail, or e-mail to:—

Abed Kahale
E-mail: AKahale@compuserve.com

WEBPAGES

http://users.aol.com/clubbbs/tsnug/
http://www.outlawnet.com/~jboatno4
http://www.unixville.com/2068
ql-users@nvg.ntnu.no

TreaSury NoteS

As of March 24, 2001, we have a balance of $698

Input/Output

Abed Kahale

My apologies for those of you who had their mail returned due to "Return to senda ♫♪♫♪ Address unknown".

The builder, with his infinite wisdom, assigned the same street numbers to W. Oaks Place and W. Oaks Trail. But the US Postal Service had the last word and the builder had to re-number the street. Mine from 232 to 432 West Oaks Trail.

Hi Abed,

Just checked out the T/SNUG Website and found that my email address is incorrect. My home address is: pandersn@peakpeak.com. I have also been checking out the Warajevo emulator and works quite well on my PC at home. I have also downloaded the Zilog Developer Studio to assist me in compiling machine code programs for the TS 2068. It sure is a lot easier to debug programs with an assembler than doing it by hand. I have also found and corrected typographical errors in some of the programs in the books I have.

I am still interested in working directly with the TS 2068, but my RamDisk doesn't work too swell. I believe the problem to be a bad solder joint or one or more bad chips. I'm not that good at troubleshooting, but I'm learning by doing. Can't wait for the next issue. Keep up the terrific work! Sinclairly,

Paul Anderson

.....So, kindly update ZQA!, by deleting all mention of it amongst extant BBSs, listed on Page 2. And, BTW, that means a lot of valuable stuff here for the devoted collector of 2068 memorabilia, and the BBS is still functional !

! KEEP ON TIMEX'n !

David E. Lassov 520-882-3972 (voice)

emanon@azstarnet.com (email)

My Timex Sinclair 1000 has just come back to me after twenty-some years in a friend's attic and apparently needs a little work.

Can you point me to a possible source for the circuit diagram and any user groups? Many thanks and 73,

John S. Caylor

jcay@juno.com

Greetings, Abed

Many thanks for your kindness in replying to my query ..... and in the midst of your own task of getting settled. Let me explain. I have a childish eagerness to fire up my TS-1000 but I do not want to put the slightest pressure on you. When you come across it, when it's convenient for you, I'd sure like to obtain a circuit diagram for my ailing machine and to subscribe to your newsletter.

After years of sitting in a friend's attic, it was returned to me in apparent excellent condition but there's no output signal shown on a scope. Among my computer and ham friends I can find no suggestion for a repair tech for this machine without a circuit diagram. With a diagram, I can ask one of the few competent, responsible people I know who would enjoy the challenge.

In the mid 80's I organized a Sinclair Club of young people and we had a wonderful time in our early, fumbling coding, wiring in keyboards, and devising clips to keep connector cable plugs from slipping.

I got seduced into Pascal coding on a Kaypro and gave all my Sinclair equipment to the local community college museum .....which later silently got rid of the collection. When TS-1000s started to be remaindered off at giveaway prices I got one for the young daughter of a friend, now a United Airline line mechanic who just returned it.

Again, many thanks. If there's anything I can do for you out here, let me know

John S. Caylor

Hello John,

I thought that I better respond now rather than sometime later.

Since it hasn't been in use for years, I suspect that the electrolytic capacitors went bad (shorted out). This will happen to any electronic device that has not been in use for a long time.

I suggest that all the electrolytic capacitors be replaced by someone familiar with printed circuit board desoldering/soldering. The rectifier diode maybe shorted out too and should be replaced.

I built the ZX-80 from a kit in 1979 when it first became available so as to learn the BASIC language.

I was not able to do so on the company's IBM mainframe computer because of my allotted time (use) was limited, it was the bean counters' computer !!!

Abed

I'm curious about the status of the use of Sinclair computers. I know some people wax nostalgic for these antiques (in fact I have one around here some place). How many members does the user's group have and are they really users or primarily historians?

I'm working on a story: sort of a "where are they now" piece on old OS's.

Stephen Beals

bealss@rochester.rr.com

Hello Stephen,

Most of them are users just like myself. I do use my Sinclairs a few times a month. Mainly those programs that I programmed myself back in the old days. Unlike the PC, one can customize the programs to the whims of the moment - no macros to deal with.

I am a retired electrical engineer. In the early 70's, ...Later on, I was connecting through an acoustic modem and teletype (no monitor) to the IBM "Time Share" computer in down town Chicago.....

Abed

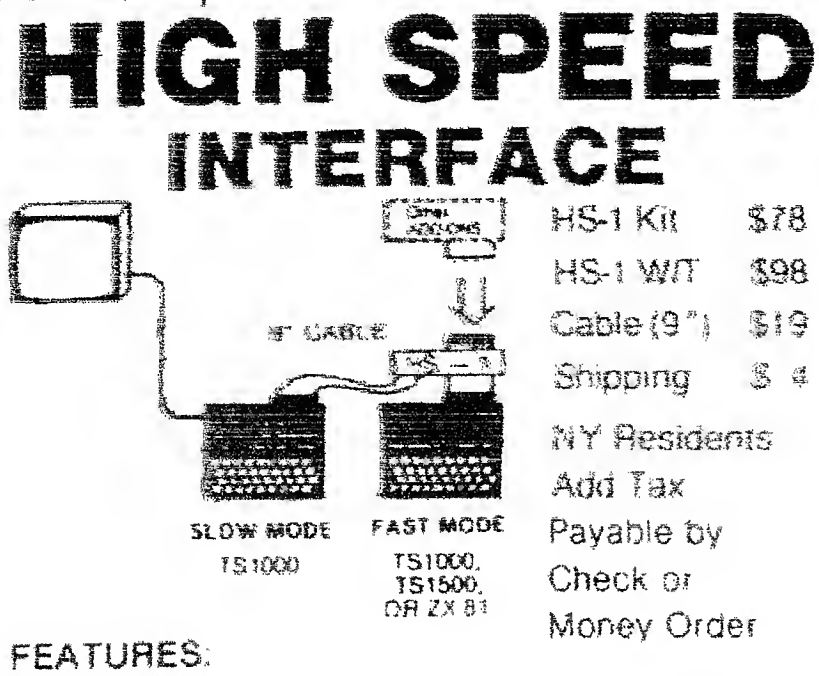
Hi Abed!

After a long time I write again and hope I'm not too late for the next issue of ZQA! German ZX-TEAM is still alive, I hope you enjoy ZX-TEAM- MAGAZIN, issue

6/2000 will be published in the next days. In the next year we will have our jubilee meeting!

5th ZX-TEAM-meeting from 2nd to 4th of march 2001 in Dietges near Fulda in the heart of Germany. Of course you and all readers of ZQA! are invited to come. For more information please look at ZX- TEAM-homepage www.zx81.de.

This time I have a favour to ask you for, could you please publish the following text in ZQA!. I also have attached a ZIPped BMP-file with the scanned ad, my text is related to. High speed interface for TS1000/ZX81 HS-1 - information request.



Dear readers of ZQA! I'm searching for information about the HS-1. I've found the advertisement shown above in the American magazine SYNC March/April 1984. According to the text HS-1 will connect two TS1000/ZX81 and you can operate your program in FAST mode on one of the computers, while the other one will work in SLOW mode for a continuous display.

We have already tried to discuss the function in the ZX81 mailing list, but nobody ever has seen a working HS-1. Maybe it uses /BUSRQ and /BUSAK, but nobody really knows. I hope one of you will know more about HS-1, or even better will have a HS-1 (dead or alive). I would be very glad, if someone of you could help me with more information.

Thanks in advance, Sinclairly yours

Peter Liebert

peter@zx81.de

For my postal address please look at the Unclassified Ads in this issue of ZQA!

Good byte for now, yours "Sinclairly" **Peter**

5. ZX-TEAM-meeting 2-4 march 2001

ZX-TEAM-Homepage: http://www.zx81.de

ZX81-Web-Ring

http://home.t-online.de/home/sinclair_zx81/zx81_wbr.htm

Sender: P.Liebert@t-online.de

From: cmolnar@stamps.com

Subject: Re: Loading Tape Programs

On Sun, 4 Feb 2001, **Christian Molnar** wrote:

I tried LOAD "" but it just sits there blank, although I hear the tape doing its thing. Is this the correct way of loading whatever it finds first?

Yes. Of course, it's been a while since I did that, either. :-)

Is it that it's just not hearing the tape right and I need to play with the volume/eq?

Most likely. What do you see in the border of the screen? If it's seeing data, the colors should change, followed by moving horizontal bands.

William McBrine

wmcbrine@telocity.com

Hi Louis,

According to the October 1994 issue of Update magazine, there was/is a BBS program written for the Oliger drive system. Here is the blurb from the magazine:
Oliger Disk Drive BBS Program, this creates a single user BBS program, with several message bases, E-mail, and Sysop Chat area. We have also added many other Oliger disk drive programs to this collection, as well as some playtime. This was written by Paul Holmgren. The price is $20

By the way, let me put in a plug here for John Oliger :). He is still in business and he still has most if not all of the TS items he had for sale back in the 80's. He provides great service and even better customer service after the fact. I would encourage anyone not using one of his drive systems to give it a try! Hope this helps.

Luke Perry

To: 2068@unixville.com

Hi everyone, I had a thought about something and I wanted to run this by everybody and see what people thought. I have just about most of the 'Time Designs' magazines and I think all of the 'Update' magazines also. There is a lot of great Timex/Sinclair info in those magazines, as well as info on all of the Sinclair machines (but Time Designs as you know focused more on the TS2068).

Wouldn't it be great if a web site could be created, that would have all of the content of these magazines on it? I think it might be harder to get the OK from the people that ran Update, but Time Designs has been out of print for over 10 years now and I am sure the editor(s) could probably care less now if all of this were online. I do not have a scanner, but they are cheap and I would gladly buy one for this project. I don't know, I just think there is too much good info in those magazines for them to just sit and collect dust. It would be a good source of reference material on the Timex computers to have these online. Any comments? see ya,

Luke Perry

Luke,

I think that's a great project. You could host it on my server also, if you like. It'd be cool if you could run an OCR

on it, also, so that the data can be searched, but I know that might be difficult. Perhaps you could HTMLize the indexes of the issues so at least some info is searchable.
It's definitely going to take you some time, though. And space. I'd gander each page of a scan can take up a sizable chunk of memory. If you need an OCR software I have one that runs ok under windows. Let me know offline.

Louis Florit

Hi,

It would be great to have all Time Design magazines on the net (I own two numbers). Of course this will get you lots of time.

This project is similar with the Spanish MicroHobby magazines. I have read the Spanish Sinclair newsgroup and HobbyPress doesn't authorize the publication of MicroHobby magazines in the internet.

Johnny Red, Portugal
Timex Computer World
http://timex.123go.cx

On Sun, 4 Feb 2001, Christian Molnar wrote:

I tried LOAD "" but it just sits there blank, although I hear the tape doing its thing. Is this the correct way of loading whatever it finds first

Yes. Of course, it's been a while since I did that, either. -)

Is it that it's just not hearing the tape right and I need to play with the volume/eq?

Most likely. What do you see in the border of the screen? If it's seeing data, the colors should change, followed by moving horizontal bands. --

William McBrine
wmcbrine@telocity.com

Hi "jboatmo4"!

I'm a Sinclair QL User (from about 1988-1995), but am not because my three Sinclairs were excessively charred in a uninsured house fire. I'm disabled due to repeated back injures, though not officially so (not enough official hours worked for Social Security to care (due to seven years of newspaper-route delivery (at less than 1/3 of minimum-wage))). So I'm living on my Mother's couch, and making maybe $100 a month and so far haven't managed to have enough cash to -buy- a replacement QL computer.

I had a backup offsite, that happened to be on my desk for swapout repair when the fire hit. I still have my software and manuals. I want to make a microdrive-hardware-compatible floppy-disk drive, but I need a system to do the work with. I also need a system to move my files and programs to a QL software-emulator. Then there's the about forty-tubes of DIP DRAM chips that I'd like to build into QL RAM boards (I bought them by the pound at the Tektronix RAMS (surplus) outlet for < $6). So I'm hoping to help keep a bunch of QL computers running usefully further into this century.

But I need a working unit (-keyboards- I can fix), and hopefully some 'dead' QL's for swappable-spares (too often needed anymore).

So why am I bothering You? Hoping you have QL's that you are not using and haven't sold, or perhaps know other Users who have sent their machines to the closet or are at or over the edge of maintenance. I can raise the money for shipping. I've finished a consulting job that pays enough I can maybe buy a QL... but they are very slow at paying, and USA QL's are getting hard to find...

I need to get one working QL. I have the American Technical Manual, and have fixed QL's successfully the three times they have failed on me. I'm willing to help anyone who would like to convert to using a emulator, including transferring their microdrive files (once I -have- a working machine), in exchange for their dead unit. Other than that, I'm good at finding answers, and searching the internet (barter, anyone?).

So I've used enough of your time? I'd be happy to answer any of your questions. I wish I still had a local QL dealer (RMG Enterprises in Oregon City is long-gone...). So how can I replace them? Yours truly, Bob Wilson, Jr.
ebayjunk@inmail.com

There is a QL headed your way to your USPS address. The postage was $13.80+my handling@$5.00 makes your cost $18.80. I did get a copyright screen to verify that it works that far. The rest is on you. The Scrabble game was in the box as shipped to RMG. Now it's yours. All T/SNUG asks is that you report on your findings on the condition of the QL as an article for ZXir QLive Alive! the group's newsletter.

The delivery confirmation # that you can use to track the package on the USPS.com web site is 0304 7990 0000 5258 2037. Good QLing,

J. Shepard
jshepard@wccta.net

Abed,

Thanks for the latest T/S mailing digest. Would it be better to create a mailing list for all this T/S discussion, instead of sending it out quarterly? On the QL side, we have a QL-users mailing list that is a great way for QL users to get help from others, and rather quickly.

If the T/S community has a similar mailing list, I think that the rate of assistance would go up dramatically. People could get help much quicker, have better conversations, etc. I can see T/SNUG being the sponsor of the mailing list. If T/SNUG needs any help, I can do some research on places to host the mailing list.
P.S. I'm about 100% QL these days (mostly on the Q40), but I still have a little knowledge of the Z88 and earlier systems. I found myself looking at a couple of Z80 books at home and wondering if it would be fun to try some Z80 assembly coding.

Tim Swenson
swensont@sirclive.csd.sgi.com

Here is a listing of software available in the Tape and **JLO PD** library. This software is available on 5 1/4" double-density disks in JLO format, or on regular cassette tape, though the contents of a disk will certainly not fit onto one cassete tape. In this case, it would be wise for people to specify what programs they would like and I can copy those to tape. The software is available to all T/SNUG members for the cost of the media and postage.

I will have available to you next issue the

contents of PD disks numbers 6-10.

T/SNUG JLO Public Domain Software List:

Disk #1

Leader	Search
File_Dex	Mark_Move
Erase_File	Rem
Chopin	Beatles
Spell	Header
Dosdex Mgr	Piano
Smartext	Ohm's Law
Multiply	Peek Vars
Blockbuster	Golf
Kitchaos	Poker
Concentrate	Renumber

Disk #2

Voicechess	Portfolio
Shooter	Paranoid
Easytype	Graph Show
Feast	The End
Sound	Music
Grand Prix	Hang-Man
Knights	

Disk #3

Adventure	Advert
Aftermath	Album
Aliens	Allfone4
Analyser	Angels
Animation	Anthem
Articexp	Art
Assembler	Asteroids
Attack	Autografix

Disk #4

Mscript 5.5	Keyboard Tutor
Accounting	Vu-3d
Budget	

Disk #5

Fortress	Fractal Theatre
Genetics	Graveyard2
Hangman	ibmgraph
I-Ching	3-D Funct.
3d Words	Dam Attack
Disk Filer	Disk Label
Doorway	Easy Edit
Quake	Egg
Fallout	Ferry
Flash	Flow Chart
Blackjack	Battleship
Bio-Graph	Biorythms
Blaster	Box
Bricks	Calendar
Calorie Burn	Canada

Luke Perry
3708 NE 109th Ave. #115
Vancouver, WA 98682
doidy34@yahoo.com

I have a few things that may be of interest to someone.

TS-2068 Software

(from RMG):

Personal Secretary (for OS-64)(Zebra)
Yacht (Wilcox)
Voice Chess (Softsync)
SpectraTERM 1.30 (Byte-Back)
Zeus Assembler (SoftSync)
ZPrint 80 (Zebra)
Screen Design (Arrow Software)
Sound Design (Arrow Software)
Tech Draw Jr. (Zebra)
ArtWorx version 1.1 (NovelSoft)

For the cost of shipping

Jack Boatwright
jboatno4@outlawnet.com

Abed,

I did get a request from Dave Liebowitz (who'd gotten hold of a Z88) who was looking for the cable that hooks up the Z88 to a PC. He has a newer version of the PC-LINK program but no cable. I told him if I could find mine I'd send it but the search revealed nothing. I suggested he contact Jay Shepard in Iowa but haven't heard back from him. (I hope he had more success there.)

Speaking of the Z88, I got mine out of mothballs for an Alzheimer's Support meeting last month and find that it's still the best thing to use fror meeting notes. It weighs only 2 pounds; it's QUIET; the batteries don't run out while you're using it: and it's easier to use for this purpose than my Palm Pilot. Unfortunately, since it never synched with a PC, I use a PC notebook for "in-the-lap" word processing -- but it's too darned heavy to tote under your arm.

Take care and enjoy your new digs.

John Donaldson
lldnldsn@aol.com

On the Sinclair front, I want to talk more to Dave Solly and see if he knows about LogiCalc and also study his version of the LarKen Manual and see if it has anything mine didn't or if there is stuff in mine he could use. I still get occasional Sinclair related mail for things that are in the stores of Jack or J. I then forward it to them.

Bob Swoger
CENG108@email.mot.com

From: "Manuel A. Quintero" <manuieq@erols.com>
To: "J Shepard" <jshepard@wccta.net>
Sent: Friday, March 09, 2001 6:11 PM
Subject: QL monitor

Have one working QL monitor-- do you want me to send it?

Thanks for the offer, Manuel. The TSNUG warehouse would be more than happy to have your monitor to offer to those that would wish to have it.

J. Shepard

Abed,

Could you please put in the next issue of ZXir QLive

Alive! Newsletter, that

I'm looking for an 8-pin composit monitor cable for a Spectrum 128+ Computer.

Thank You!

DANE L STEGMAN
26 MARSHALL AVE
AKRON NY 14001-1016
dane@buffnet.net

Dear Abed,

On our 5th jubilee meeting two weeks ago Joachim told me that a least two issues of ZX-TEAM-MAGAZIN have been returned from the USA with the information, that they were undeliverable to you. You will get them again and of course the next ones too, to your new postal adress.

I hope Glen Goodwin, who came from Orlando to our meeting will write an article for ZQA! Keep on Zxing....

Peter Liebert
www zx81 de
P.Liebert@t-online.de

Sinclair Sites

http://www.nvg.ntnu.no/sinclair/planet/index.html
http://www.komkon.org/fms/stuff/spectrum.faq

To: 2068@unixville.com
Hi all,

I believe I have posted a different variation of this question before to the mailing list, but I have since deleted the responses. What I am seeking is a terminal program for the TS2068 that will handle "VT100" terminal emulation. I occasionally dial-in to my local libraries card catalog, and it uses the VT100 terminal emulation standard.

I seem to recall someone mentioned a program for the Spectrum (SpecTerm?) but was not sure if this would work with the Westridge 300 baud modem? Thanks!

Luke Perry
doidy34@yahoo.com

Hello Abed...

Attached to this e-mail please find three articles. These are not really my own articles so I really can not take credit for them. These are extracted from various bulletins and books I have collected over the years. As for my own stuff, I am pretty much at the bottom of the proverbial barrel. I have one large Pascal program which I wrote to convert M-Script files into IBM-ASCII files. The programs are also designed to run on Gerton Lunter's Z80 emulator rather a true TS 2068 or ZX Spectrum. If you are interested, perhaps I could present it over several issues of ZXir QLive Alive.

Speaking of Gerton Lunter, does anyone have a recent e-mail or snail mail address for him?

The only addresses I have are no longer valid. Barring that, does anyone know how I might get a legal copy of the Z80 emulator for Windows?

I am hoping that maybe someone can write an article on how to use the T/S 2068's function dispatcher. There is only a little blurb on it in one of Mazur's books and his example is not very clear to me. Cheers,

David Solly
k_david_solly@hotmail.com

Z88

Looking For A Home

that will put it to work

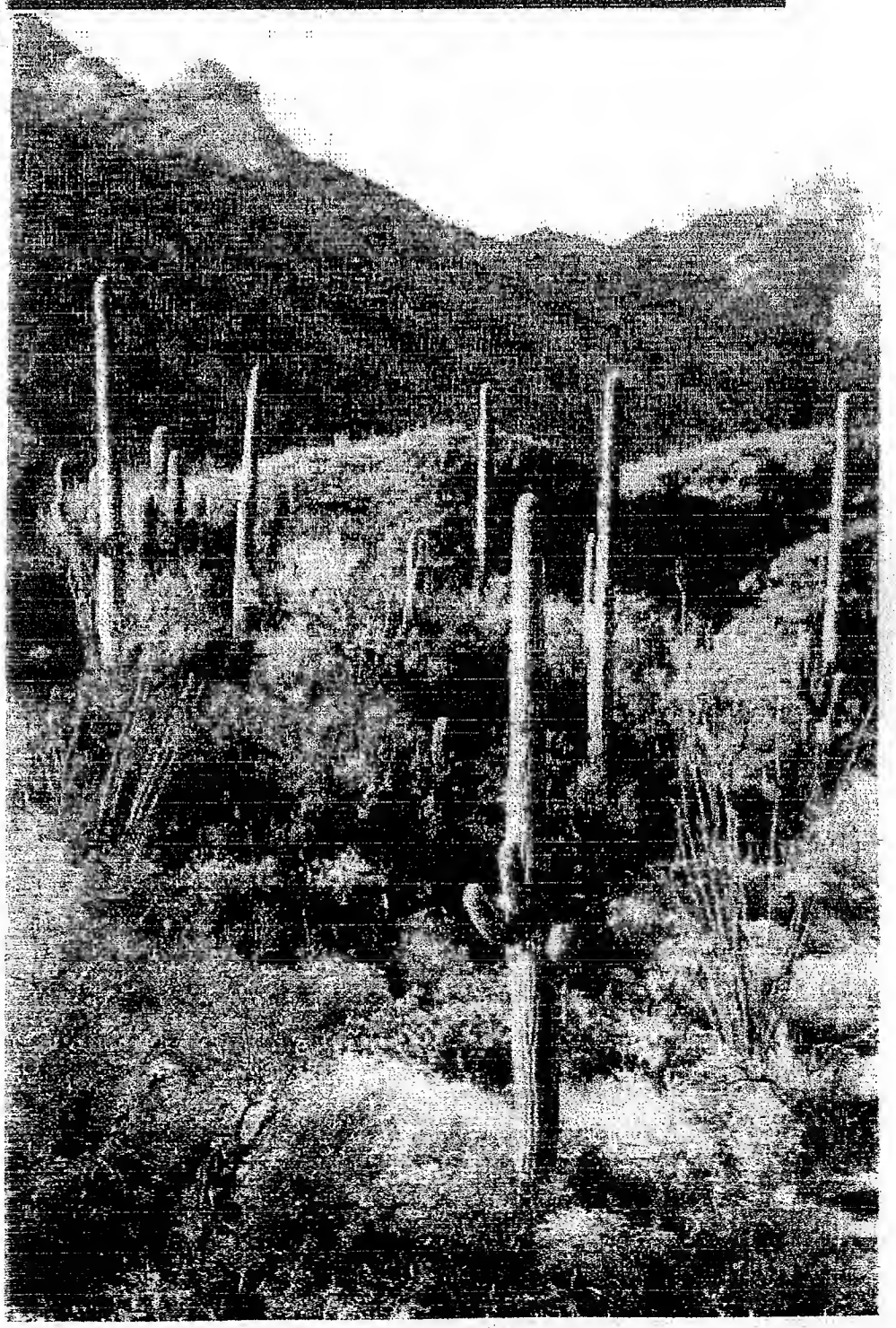
Complete with manual, books, files, cables, AC adapter, serial printer cable, even connects to a MacIntosh.

From Joan Kealy

For the cost of shipping (about $15)

Contact

Abed Kahale
432 West Oaks Trl
Woodstock GA 30188-7358
akahale@compuserve.com



A TRIP TO THE ZX-TEAM LAND

Glen Goodwin

The Fifth Annual ("Jubilee") ZX-TEAM meeting was held in Dietges, Germany March 2nd through 4th, and I was there! I've always wanted to attend a ZX-TEAM meeting, and this year, after getting a preliminary "okay" from the Director of Finance (my wife), I sent an inquiry to Peter Liebert-Adelt, who organizes the meeting each year. Peter very enthusiastically extended an invitation to me, and after hustling up a passport, tickets, etc. I found myself halfway over the Atlantic Ocean, on an eight-hour eastern-bound flight

The German railroad system is very efficient and user friendly. After my arrival at the Frankfurt-am-Main Airport I only had to go down one floor to catch a train to the Frankfurt Central Railway Station. Another train took me from there to Fulda, the largest city near the meeting-place in Dietges. All in all it only took about three hours for me to claim my baggage, get through customs, exchange currency, and travel to the Fulda Station, where Peter was to pick me up on his way to the meeting.

It wasn't long until I was approached by a couple of suspicious-looking guys. One of them -- Peter -- pulled a ZX81 from inside his jacket and asked if I knew where he could unload a bunch of these. They hustled my luggage into Peter's van, which also contained Peter's wife Ruth and three other ZX-TEAMers. After a short drive we were at the lodge in Dietges.

By this time it was about six o'clock on Friday night. The meeting room was full of people bustling around, getting acquainted, and setting up the equipment they had brought to show off. After dinner and a couple of more hours of looking over people's shoulders I had to pack it in since I'd been up for about 35 hours. I can never sleep on planes . . .

Saturday morning I was jet-lagged and didn't get up until after nine. Breakfast was almost over but I managed to scarf a few rolls and a pot of coffee (thank God the Germans make coffee the same way we do in the States) before the food was cleared away. Pandemonium then ensued – throughout the day people were coming and going, trading information, hardware, software, etc. Additionally there were a number of demonstrations.

Kai Fischer was there to present me with an IDE hard drive and controller for my ZX81 (I had traded him some State-side goodies in advance) and also to show off his other inventions including the "ZX81 laptop," which has a hinged LCD screen attached! I think we'll see a lot more great projects from Kai.

ZX-TEAM founder Joachim Merkl and Gerhard Dohnke both had ZX96s on display. These are very impressive and powerful machines with features including an IDE hard drive, 3.5" floppy drive, 1 MB RAM, AT-style keyboard interface, LCD screen, serial and parallel ports, and an improved bus connector. Gernot Feucht set up a ZX81 with a modem attached and used it to dial into the ZX-TEAM Mailbox, a 24-hour BBS. In the non-ZX81 department, Wolfgang and Monika Haller (the "Womoteam"), who head up the Spectrum Profi Club, showed off their Sam Coupe which sported a 340 MB hard drive, CD-ROM drives, and 16-bit sound.

Halfway through the day the demos began, with Christof Odenthal, Markus Schiuharl, Joachim and Gernot each bringing out their robots (or "robbies," as the Germans say). Philip Mulrane gave a demonstration of a DOS/Windows-based C compiler which produces ZX81 code. Finally, Gernot showed a film of some of his other ZX81-based robotics projects. The rest of the afternoon and evening consisted of more people coming and going, lots of friendly trading, and for me, a grueling one-hour crash course in MEFISDOS at the hands of the master, Joachim himself.

The MEFISDOS (MErklFIScherDOS) operating system, developed by Joachim Merkl and Kai Fischer, is powerful but very simple to use. The arrow keys may be used to navigate through subdirectories and LOAD programs, or commands can be issued directly from the command prompt. MEFISDOS commands can also be called from within BASIC programs, so it's easy to make a program auto-run, for example. MEFISDOS was included in the hard drive interface I received from Kai, and I have been using it on a daily basis for over two weeks. I have yet to find any bugs or other anomalies.

The two main limitations I know of are: eight-character-max file names, and file size is limited to 16 KB. The latter isn't really a factor; since hard drive file i/o is fast, "chaining" programs is easy and practical, so it's conceivable that a "program" – really a group of them – could consist of 1 MB of BASIC code, or more!

Sunday morning there was just enough time to eat, pack, clean the lodge, and say goodbye to the other ZX-TEAM members. I learned so much and met so many fascinating and genuinely helpful people, and in such a short time. Everyone was so willing to share whatever they had, which is especially remarkable considering that I don't speak German, and we had to converse in English. I'll treasure this experience for the rest of my life.

ZX-TEAM is a great group of people who are taking the ZX81 far beyond anything Uncle Clive ever dreamed of. **anyone** who has the slightest chance of attending a meeting should start planning now. You won't regret it for a minute.

Glen Goodwin
acme_ent@bellsouth.net

Setting and Resetting Caps Lock

David Solly

It is sometimes useful to be able to switch the ZX Spectrum keyboard's cap mode on and off so as to control the keys for which a program is testing. Caps mode is controlled by the system variable FLAGS2 at location 23658 (#5C6A). The instruction POKE 23658,8 sets caps mode but also resets all the other flags in that register.

There is a ROM routine which can be called using RANDOMIZE USR 4317 but if caps mode is already set, this call will reset it.

The solution is a short machine code routine that can be loaded anywhere in memory. It consists of just three instructions:

```
LD HL,23658
SET E,(HL)
RET
```

A suitable program to set up this routine would look like this:

```
1000 LET start = any suitable address
1010 FOR a = start TO start+5
1020 READ b: POKE a,b
1030 NEXT a
1040 DATA 33,106,92,203,222,201
```

Caps mode can then be set by RANDOMIZE USR (start). To force the Spectrum into lower case mode change 222 to 158 in the data in line 1040.

This machine code routine renders itself nicely into the HiSoft Pascal procedure listed below. If the value passed to the Boolean variable ON is TRUE then the caps lock is switched on. If the value passed is FALSE then the caps lock is switched off.

```
PROCEDURE CAPSLOCK(ON : BOOLEAN);

{
This procedure will set the ZX Spectrum
and the T/S 2068 caps lock on when ON
is TRUE and off when ON is FALSE.
}
 BEGIN

  IF ON = TRUE THEN
   INLINE(#21, #6A, #5C,   {LD HL, 5C6A}
          #CB, #DE);       {SET 3, (HL)}

  IF ON = FALSE THEN
   INLINE(#21, #6A, #5C,   {LD HL, 5C6A}
          #CB, #9E);       {RES 3, (HL)}

END;
```

Graphics Procedures for HiSoft Pascal

David Solly

The following HiSoft Pascal source code augments and provides some alternative methods to the graphic functions and procedures provided in the *Turtle Graphics* package that is supplied with HiSoft's Pascal Version 1 7M compiler for the ZX Spectrum.

CIRCLE(X,Y,R) draws a circle, center X,Y and radius R

DISK(X,Y,R) draws a series of circles at center X,Y in an attempt to fill a disk of radius R.

PLOT(X,Y) is a relative draw like the ZX Spectrums DRAW function but no third parameter is allowed so curves cannot be drawn.

LINE(X1,Y1,X2,Y2)draws a straight line between X1,Y1 and X2,Y2.

FILL(X1,Y1,X2,Y2) shades a rectangle. X1,Y1 specifies the bottom left hand corner and X2,Y2 is the top right corner.

COPY is identical to the BASIC COPY function

Most of the procedures work by calling the appropriate ZX Spectrum ROM subroutines. Others use a procedure which has already been defined.

```
PROCEDURE CIRCLE(X, Y, R : INTEGER);

BEGIN

 POKE(23681, ORD(R));
 POKE(23728, ORD(X));
 POKE(23729, ORD(Y));
 INLINE(
  #D9,        {EXX      }
  #E5,        {PUSH HL  }
  #D9,        {EXX      }
  #3A,#B0,#5C,  {LD A,(5C81)}
  #CD,#28,#2D,  {CALL 2D28  }
  #3A,#B1,#5C,  {LD A,(5CB1)}
  #CD,#28,#2D,  {CALL 2D28  }
  #3A,#81,#5C);  {LD A,(5C81)}

 INLINE(
  #CD,#28,#2D,  {CALL 2D28 }
  #CD,#2D,#23,  {CALL 232D  }
  #D9,        {EXX      }
  #E1         {POP HL   }
  #D9),       {EXX      }
END;
```

```
PROCEDURE DISK(X, Y, R : INTEGER);

VAR I : INTEGER;

BEGIN
 FOR I := R DOWNTO 1 DO
   CIRCLE(X, Y, I);
 END;
PROCEDURE PLOT(X, Y : INTEGER);
BEGIN
 POKE(23728, ORD(X));
 POKE(23729, ORD(Y));
 INLINE(#ED, #4B, #B0, #5C, {LD BC,(5CB0)}
      #CD, #E5, #22);    {CALL 22E5   }
END;

PROCEDURE DRAWBY(X, Y : INTEGER);

BEGIN
 IF X < 0 THEN POKE(23296, ORD(#FF));
 IF X >= 0 THEN POKE(23296, ORD(1));
 IF Y < 0 THEN POKE(23297, ORD(#FF));
 IF Y >= 0 THEN POKE(23297, ORD(1));
 POKE(23728, ORD(ABS(X)));
 POKE(23729, ORD(ABS(Y)));
 INLINE(#D9,            {EXX       }
      #E5,            {PUSH HL    }
      #D9,            {EXX       }
      #ED, #4B, #B0, #5C, {LD BC,(5CB0)}
      #ED, #5B, #00, #5B, {LD DE,(5B00)}
      #CD, #BA, #24,    {CALL 24BA   }
      #D9,            {EXX       }
      #E1,            {POP HL    }
      #D9);           {EXX       }
END;

PROCEDURE LINE(X1, Y1, X2, Y2 : INTEGER);

BEGIN
 POKE(23677, ORD(X1));
 POKE(23678, ORD(Y1));
 DRAWBY(X2-X1, Y2-Y1);
END;

PROCEDURE FILL(X1, Y1, X2, Y2, INK  INTEGER);

VAR I : INTEGER;

BEGIN
 WRITELN(CHR(16), CHR(INK));
 FOR I := 1 TO X2 DO
   BEGIN
    PLOT(I, Y1);
    DRAWBY(0, Y2-Y1);
   END;
END;

PROCEDURE COPY;

BEGIN
USER(#0EAC);
END;
```

PRODUCING FLASHY LISTINGS

David Solly

It is not widely known that ZX Spectrum and TS 2068 listings can incorporate colour commands (and indeed FLASH and BRIGHT) as well as inverse video. This feature is probably a happy accident of the machine's logical structure but it allows you to produce pretty listings.

The way to obtain these effects is to go into extended mode (E-cursor) after the line number. You can do this on first entering the line or when using EDIT. You then use the number keys ȳ shifted and un-shifted ȳ to get the effects.

This capacity has several uses:

1. Producing an invisible listing (even when EDIT is used),
2. Drawing attention to an important REM statement or a test line which must be deleted after debugging, and,
3. Highlighting all the lines within a FOR - NEXT loop.

The effect of a control code is not confined to a single line so if you wish to highlight a particular line then you must include two changes, one to produce the effect and another to restore the original conditions. Each of these control codes takes up two bytes of memory and very strange effects can be caused by deleting just one of the bytes.

Key	Effect When Un-Shifted	Effect When Shifted
0	black paper	black ink
1	blue paper	blue ink
2	red paper	red ink
3	magenta paper	magenta ink
4	green paper	green ink
5	cyan paper	cyan ink
6	yellow paper	yellow ink
7	white paper	white ink
8	normal brightness	flashing off
9	high brightness	flashing on

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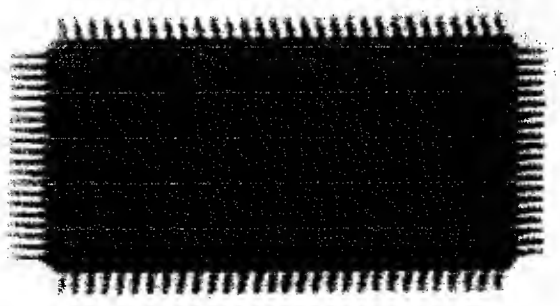

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The Old Days

While unpacking, came across this. I made the front cover of a magazine.

home appliance builder

January 1964 • Volume 29, No. 1

The Industry's Management Journal

Electronic moisture sensing device

Available for both gas-fired and electric models of clothes dryers, this moisture sensing device enables the homemaker to select the exact degree of dryness she prefers for the clothes being laundered. It was developed by Controls Company of America and is one of the new features on Hamilton Manufacturing Company's line of automatic dryers.

By continually measuring the moisture content of clothes, the device prevents over-drying, which can be harmful to fabrics and also expands the dampening of clothes before ironing. By cutting down on machine time, fuel or power ordinarily wasted during excessive drying cycles is conserved.

The device operates on the principle of measuring electrical resistance in clothes. A low level current is sent through sensing bars mounted inside the dryer drum. Current is conducted from the control console to the sensing element by means of a slip ring mounted on the drum shaft. Resistance increases as the clothes dry, permitting less current to cross the sensing bars. When the clothes reach the exact degree of selected dryness, the current automatically shuts off.

Among the principal advantages of the device is that it is independent of line voltage, and the heat source and drying temperature of the machine. It is also independent of fabric type and line screen conditions, and cycles clothes to the desired degree of dryness regardless of the actual amount of moisture content and ambient temperature and humidity. Controls Company of America, Melrose Park, Illinois.

United States Patent Office

3,443,163
Patented May 6, 1969

3,443,163

MOISTURE SENSING CONTROL USING SWITCHING TRANSISTOR FOR VOLTAGE REGULATION

Wilbert E. Beller, Park Ridge, and Abed G. Kahale, Roselle, Ill., assignors to Controls Company of America, Melrose Park, Ill., a corporation of Delaware

Filed Feb. 21, 1967, Ser. No. 617,696
Int. Cl. H01h 47/32
U.S. Cl. 317—148.5 4 Claims

ABSTRACT OF THE DISCLOSURE

The moisture sensing control for clothes dryers charges a capacitor as moisture level decreases (resistance of leakage path increases) until neon bulb fires to pulse the base of a switching transistor to pass enough voltage through a coil in the collector circuit to cause a magnetic latch to open and shut down the dryer. A voltage network forward biases the transistor to pass a small amount of current through the coil—less than required to open the latch—which varies with variation of supply voltage to thereby function as a voltage regulator.

The magnetic latch concept is claimed in our application Ser. No. 617,630, filed Feb. 21, 1967.

Background of invention

Moisture sensing controls of this general type are in commercial use and are disclosed in Willcox application

C_4 to allow for clothes not bridging the rings for a period of time. As the charge builds up on capacitor C_4 the potential across neon bulb N_2 increases. Lead 16 connected to the other side of N_2 is connected to the base of transistor Q_1 through resistor R_8.

Coil K_1 is connected between the DC supply and the collector of the transistor while the emitter is connected to lead 30. When tube N_2 fires, the transistor conducts and the current flowing through coil K_1 will set up a magnetic field opposing the field of permanent magnet 18. The permanent magnet is used to hold switch 20 closed by attracting a ferrous keeper. When the coil is energized by the transistor, the magnetic fields cancel and a return spring acting on the keeper will open the switch. The switch controls energization of the heater 22 and motor 24 connected across L_1, L_2. This magnetic latch arrangement is claimed in the aforesaid application. The latch also controls switch 21 which, when opened, de-energizes the control.

A small voltage through the coin K_1 will not unlatch the switch. With this in mind, a resistor R_4 is connected between leads 26 and 28. Resistor R_3 is connected between lead 28 and grounded lead 30 which connects to N. Resistors R_4 and R_5 are connected to act as a voltage divider to bias the transistor forward slightly so a small current flows through K_1 at normal line voltage. If line voltage increases, the bias increases to increase the current through the coil (still not enough to unlatch switch 20) and increases the current through resistor R_1 which increases the voltage drop across R_1. This, then, main-

United States Patent

Beller et al.

[15] **3,662,475**

[45] **May 16, 1972**

[54] **MAGNETICALLY LATCHED SWITCH AND CIRCUIT THEREFOR**

[72] Inventors: **Wilbert E. Beller**, Park Ridge; **Abed G. Kahale**, Roselle, both of Ill.

[73] Assignee: **Controls Company of America**, Melrose Park, Ill.

3,253,098	5/1966	Perry	335/179
3,404,465	10/1968	Charamond	335/174

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Kahale

United States Patent [19]

Hanssen et al.

[11] **Patent Number: 4,617,432**

[45] **Date of Patent: Oct. 14, 1986**

[54] **ADJUSTABLE PRESSURE RESPONSIVE SWITCH ASSEMBLY**

[75] Inventors: **Tore B. Hanssen; Abed G. Kahale**, both of Hoffman Estates, Ill.

[73] Assignee: **Controls Company of America**, Schiller Park, Ill.

3,579,284	5/1971	Mason et al.	
4,262,178	4/1981	Berlin, Jr.	200/83 WM
4,263,489	4/1981	Bergeson	
4,295,019	10/1981	Buckshaw	
4,470,716	9/1984	Welch	403/407.1

Primary Examiner—G. P. Tolin

Attorney, Agent, or Firm—David L. Davis; Robert E. [illegible]

United States Patent [19]

Gebel et al.

[11] **3,798,400**

[45] **Mar. 19, 1974**

[54] **FULLY GROUNDED PRESSURE SWITCH**

[75] Inventors: **Irving Gebel**, Oak Park; **Abed G. Kahale**, Roselle, both of Ill.

[73] Assignee: **Controls Company of America**, Schiller Park, Ill.

tic, electrically insulative case above the diaphragm. The perimeter of the diaphragm is captured between the plastic case and the cup which has a tubular connector for connection to a source of pressure to be sensed. The chamber below the diaphragm between the diaphragm and cup is the pressure chamber and

United States Patent [19]

Kahale

[11] **Patent Number: 4,755,639**

[45] **Date of Patent: Jul. 5, 1988**

[54] **PRESSURE SWITCH WITH CALIBRATION TAB**

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[73] Assignee: **Eaton Corporation**, Cleveland, Ohio

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Primary Examiner—G. P. Tolin

United States Patent [19]

Kahale et al.

[11] **3,720,936**

[45] **March 13, 1973**

[54] **WARNING SIGNAL RELAY AND SYSTEM**

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[73] Assignee: **Controls Company of America**, Mel-

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[57] **ABSTRACT**

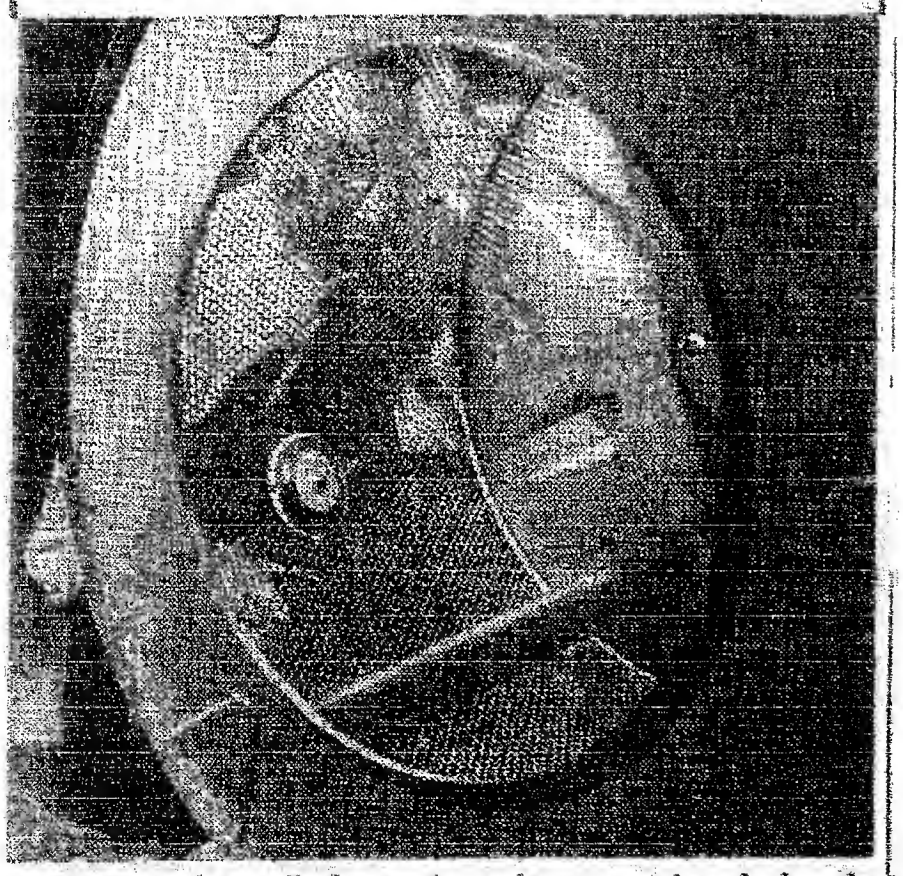
The switch is designed to be used in a washing

tions of the instrument have been developed: one with a single sensor probe for measuring temperatures of a single location with respect to absolute zero, and the other with two sensor probes that measure temperature differences between two locations. The instruments may be calibrated to read in centigrade or fahrenheit.

The single-probe design has a readout resolution of 0.001 C or F; the two-probe design, measuring a

Chicago Tribune
TUESDAY, DECEMBER 8, 1964

'Button' Senses Moisture



A single "button" electronic moisture sensing device designed for home laundry dryers provides low cost, accurate measurement of moisture in clothing and ends guesswork of conventional dryer controls. Developed by Controls Company of America, Melrose Park, the solid state device eliminates expensive factory installations of previous control designs.

Button senses moisture of laundry in home clothes drier. When the laundry is dry, circiut turns off drier.

they've been around since 1961. Practically all major drier producers are expected to offer such sensors on their machines this year and one electronics company has just developed an improved moisture-sensing device.

Driers without electronic moisture-sensors have timers that turn off a machine. But a housewife must guess at the time cycle. Generally, 4% to 6% of the weight of dry garments is moisture. If a batch of laundry is over-dried, garments may shrink, shed lint and feel rough.

In 1961, the Maytag Co., which produces its own sensing devices, first used them in its top line of machines. Now the middle-price models have them too.

On the upswing. Last year, two other drier makers started featuring the shut-off device, the Hamilton Manufacturing Co. and the Whirlpool Corp. (under the Kenmore label, the house brand of Sears, Roebuck & Co.). Hamilton buys its systems from the Control Corp. of America and Whirlpool buys its from Texas Instruments, Inc.

It says four other manufacturers are planning to use its moisture-sensing device this year.

The Control Corp. has introduced a moisture-sensor that is simpler and cheaper than its predecessor; the new one works on the same principle as the TI device. The new device differs in two ways: it no longer is necessary to directly measure the electrical resistance of the clothes to determine the amount of moisture, and a single button replaces the long brass strips that encircle the inside of the drier's drum or the brass fingers that are mounted on one of the drier's baffles, or fins.

With conventional devices, the strips or fingers are connected with slip rings to a circuit, so that the clothes are one leg of a voltage divider. As the clothes dry, the resistance increases, until, at a preset level, a triggering circuit stops the drier.

Button, button. The button sensor is a small conductor that is connected to the grounded drum through a capacitor. The underground side of the capacitor is connected to a wiper contact on the outer side of the drum. Each time the drum revolves, a charge of 160 volts is applied through the wiper to the capacitor. As the wet clothes pass over the sensor, the capacitor is discharged to ground. The amount of residual charge on the capacitor is picked off through the wiper on every revolution of the drum just before the capacitor is recharged. As the clothes dry, more residual charge is left on the capacitor after each turn of the drum. When the charge reaches a preset level, a circuit is triggered, turning off the drier.

The Control Corp.'s engineering director, Paul Williams, estimates that apart from the installation, which is simpler, the new system will cost $12.50 less than the earlier device. And Hamilton is expected to be the first customer for the new system.

Texas Instruments' device runs about $10 for the circuitry, plus the brass sensor strips and installation are extra.

Consumer

Make mine dry

Electronic devices that automatically turn off a home clothes drier when the laundry is dry are starting to gain in popularity although

Manufacturing

Irradiated circuits

Irradiation is becoming a favorite technique for stabilizing and standardizing the electrical character